

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THEODORE W. NYE, ALLEN J. BRONOWICKI
GEORGE R. DVORSKY and RICHARD E. WYSE

Appeal No. 1997-3088
Application No. 08/521,562

ON BRIEF

Before HAIRSTON, KRASS and FLEMING, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1,2, 4-8, 10-18, 20-23 and 25-33. Claim 34 has been indicated by the examiner as being allowable.

The invention is directed to the provision of a modular control patch assembly having sensor and actuator piezoelectric elements for controlling strain in a foundation member to which it is applied.

Representative independent claim 1 is reproduced as follows:

1. A pre-formed control patch for controlling strain in a foundation member the patch comprising a base, a piezoelectric sensor and a piezoelectric actuator located in operative relative relationship, means for placing the patch in operative relationship with the foundation member whereby the sensor detects a strain in the foundation member and whereby the actuator imparts a strain-inducing force to the foundation member, and including means for connecting control electronics in operative relationship with the patch.

The examiner relies on the following references:

Forward et al. (Forward)	4,795,123	Jan. 03, 1989
Crawley et al. (Crawley)	4,849,668	Jul. 18, 1989
Mizuno et al. (Mizuno)	4,940,914	Jul. 10, 1990

Claims 1, 5, 6, 8, 11, 17, 23, 26, 27, 29 and 30 stand rejected under 35 U.S.C.

§ 102(b) as anticipated by, or, alternatively, under 35 U.S.C. § 103, as obvious over, Crawley.

Claims 2, 4-7, 10, 12, 13, 16, 18, 20-22, 25, 28 and 31-33 stand rejected under 35 U.S.C. § 103 as unpatentable over Crawley in view of Forward.

Claims 14-16 stand rejected under 35 U.S.C. § 103 as unpatentable over Mizuno in view of Crawley.¹

¹We find it unusual that dependent claims have been rejected over Mizuno in view of Crawley, with Crawley as a secondary reference, when the claim (claim 8) from which claims 14-16 depend has been rejected under Crawley as a primary reference. Perhaps the examiner meant to reject claims 14-16 over Crawley in view of Mizuno.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

We turn first to the rejection of the independent claims 1, 8, 17 and 23 over Crawley. The examiner relies on Figure 2 of Crawley and contends that the spaced apart piezoelectric sensors (10) and actuators (14) embedded in graphite and mounted on foundation (6) meets the subject matter set forth in at least the independent claims. The examiner explains that since the piezoelectric elements are embedded, these components rest on a base and, also, control electronics (8, 12) are located between the sensors and actuators.

If strain-gauge piezoelectric elements (10) of Crawley are embedded, along with the actuator piezoelectric elements (14) of Crawley, then, perhaps, it might be reasonable to conclude that Crawley describes the claimed "patch" since the embedding substance might be said to form a base and the piezoelectric sensors (10) and actuators (14), together with the base, would form a "patch", as claimed. Appellants argue that, in Crawley, only the actuators (14) are embedded but that the sensors (10) are not specifically disclosed as embedded. While that may be true, elements (10) of Crawley's Figure 2 are described as being, for example, "piezoelectric

sensing elements, or strain gauges...” [column 4, lines 36-37] and Crawley does suggest, at column 2, lines 50-51, that in a preferred embodiment, a “plurality of strain gauges are embedded at selected locations.” Thus, while the sensors (10) in Crawley’s Figure 2 are not specifically disclosed as being embedded, there is at least a suggestion, within the Crawley reference, that they may be.

In any event, we will reverse the rejection of the independent claims under 35 U.S.C. § 102(b) because closer examination of the instant claim language, as reasonably interpreted in light of the specification, persuades us that Crawley simply does not disclose the claimed “patch.”

The instant claims call for a “pre-formed control patch” which is placed “in operative relationship with the foundation member.” That language, as reasonably interpreted in light of the specification, means that the patch is formed some time prior to affixation to the foundation member and that the patch, as a separate unit, distinct from the foundation member to which it is attached, is then attached, at some later time, to the foundation unit.

Even if we assume, arguendo, that elements (10) and (14), along with their embedding material, form the claimed “control patch” and even if we assume that this patch is, somehow, separate from structural member, or “foundation member,” (6), of Crawley, Crawley still cannot meet the instant claim language because the “patch” in

Crawley is not the same as the claimed patch which is required to be “pre-formed,” i.e., an integral unit, already in existence, ready to be attached to an element such as a foundation member, and then “placed,” or actually attached by some mechanical means, in operative relationship with the foundation member. Looking at Crawley’s “patch” in the best light relative to the examiner’s rejection, the piezoelectric elements and any embedding material are not “placed,” as an integral unit, on foundation, 6, but, rather, the piezoelectric elements of Crawley are built into, or embedded in/on structural member, or foundation member, (6).

The examiner explicitly ignores the claimed limitation of a “pre-formed control patch” and gives this limitation “no patentable weight” because it is recited in the preamble of claim 1. While the other independent claims do not use the term “pre-formed” to describe the control patch, they describe the device as being an “assembly,” which, in our view, would indicate a similar pre-formed unit of the piezoelectric sensor and actuator. It is our view that it was a reversible error for the examiner to ignore this limitation as it is this very limitation, i.e., “pre-formed” or “assembly,” which is the gist of the invention, making the device an integral unit of a piezoelectric sensor and actuator which can be mechanically attached to a foundation member so that the foundation member and the piezoelectric elements form an operative relationship upon said attachment.

Accordingly, we will not sustain the rejection of claims 1, 5, 6, 8, 11, 17, 23, 26, 27, 29 and 30 under 35 U.S.C. § 102(b) as Crawley does not anticipate the claimed subject matter.

With regard to the alternative rejection of these claims under 35 U.S.C. § 103 over Crawley, we also will not sustain this rejection because we find no reason for the artisan to have taken the teaching of Crawley and have modified it to make a separate “pre-formed” control patch or “assembly” of piezoelectric elements which could then be attached to the foundation member, as claimed. The examiner merely states that it would have been “obvious...to embed the device of Crawley [sic, Crawley] in a foundation member since the applicants have not disclosed that embedding solves any stated problem or is for any particular purpose that [sic] and it appears that the invention would perform equally well with other placement of the patch [sic]” [Answer-page 5]. The examiner clearly has not set forth a convincing line of reasoning as to why the instant claimed subject matter would have been obvious, within the meaning of 35 U.S.C. § 103. As such, no prima facie case of obviousness has been established by the examiner.

We also will not sustain the rejection of claims 2, 4-7, 10, 12, 13, 16, 18, 20-22, 25, 28 and 31-33 under 35 U.S.C. § 103 over Crawley in view of Forward or the

rejection of claims 14-16 under 35 U.S.C. § 103 over Mizuno in view of Crawley because neither Forward nor Mizuno is seen to provide for the deficiencies noted supra with regard to Crawley.

We have not sustained either the rejection of claims under 35 U.S.C. § 102(b) or the rejections of claims under 35 U.S.C. § 103 because no prima facie case of anticipation or obviousness has been shown by the examiner.

We note appellants' willingness, at page 2 of the reply brief, to file a terminal disclaimer regarding possible commonly claimed subject matter between this application and Serial No. 08/541,799. We leave this matter to be settled between appellants and the examiner at the appropriate time.

We also note a bit of curiosity at the statement, at page 4 of the reply brief, that, with regard to the examiner's RESPONSE TO ARGUMENT, "Applicants affirm the Examiner's Answer." While this may be taken to mean that appellants agree with the examiner's arguments, which would make our decision herein a pro forma affirmance, we will take this statement as being no more than an acknowledgment by appellants of the examiner's position. Of course, if we are in error in this view and appellants did, in fact, mean to agree with the examiner's arguments regarding the instant rejections, appellants are invited to file a request for rehearing urging us to reverse our decision.

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The decision of the examiner rejecting claims 1, 5, 6, 8, 11, 17, 23, 26, 27, 29 and 30 under 35 U.S.C. § 102(b) or, in the alternative, 35 U.S.C. § 103, and rejecting claims 2, 4-7, 10, 12-16, 18, 20-22, 25, 28 and 31 -33 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
ERROL A. KRASS)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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MICHAEL R. FLEMING)	
Administrative Patent Judge)	

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